IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:

Takao Morii et al. Group Art Unit: 1733

Application No. 09/853,674 Examiner: Justin R. FISCHER

Filed: May 14, 2001

For: RADIAL TIRE

DECLARATION UNDER 37 C.F.R. §1.132

Honorable Commissioner of Patents and Trademarks

Washington, D.C. 20231

Sir:

I, Kota KITAHARA, do declare and state as follows:

I graduated from the Graduate School of Environment and Information Sciences of Yokohama National University, Faculty of Engineering, Department of Artificial Environment and Systems with a Master's Degree in Engineering in March 1999;

I joined Bridgestone Corporation in April 1999, and since that time, I have been engaged in the development of tire steel cord materials and tire materials; and

I am familiar with the Office Action of February 5, 2008 and understand that the Examiner has rejected Claims 2-9, 11-14, 16-20, and 22 under 35 U.S.C. §103(a) as being

unpatentable over Sato et al. (Japanese Patent Application Laid-Open (JP-A) No. 11-78411), Sato (JP-A No. 11-78410), Sinopoli (USP 5,743,975) and Koch (USP 6,012,498) and any one of Bourgois (USP 5,198,307), Kawase (USP 3,929,180) and "Mechanics of Pneumatic Tires" (ed. by Samuel K. Clark (1981) pp. 881).

The following additional experiments were carried out under my supervision in order to make the advantages of the subject matter more clear.

Experiment: Evaluation of Resistance to Belt end separation

Each of Examples 11 to 21, which are within the scope of the currently-pending claims of the present invention, and Comparative examples 3 to 9, which are outside the scope of the currently-pending claims of the present invention, was prepared to be in a form of a test tire (185/70R14), subjected to cleat-drum test and evaluated in terms of a separation length in the same manner as shown in the Declaration dated August 19, 2004, executed by Mr. Hideyuki Chiashi, one of the inventors of the present invention, while the structure of the test tire was varied in terms of the arrangement and the diameter of the metal wires as shown in the following

Tables 5 and 6. The results of the evaluation are also shown in Tables 5 and 6. As is explained in the Declaration by Mr. Chiashi, a tire showing a separation length exceeding 8 mm is generally recognized as lacking marketability.

Table 5

	Structures of Reinforcing material		G_1	G_2	δG	Separation length (mm)	Marketability
	Arrangement of Metal wires	Diameter of Metal wires (mm)					
Example 11	3	0.21	1.40	0.38	0.32	7.5	Yes
Example 12	9	0.21	1.40	0.38	0.96	7.5	Yes
Example 13	3	0.3	1.76	0.44	0.74	5.7	Yes
Example 14	6	0.21	1.74	0.65	0.64	6.6	Yes
Example 15	9	0.21	1.74	0.65	0.96	7.5	Yes
Example 16	3	0.21	1.75	0.65	0.32	6.8	Yes
Example 17	4	0.21	1.75	0.65	0.43	6.8	Yes
Example 18	6	0.21	1.75	0.65	0.64	6.5	Yes
Example 19	3	0.26	1.74	0.61	0.32	7.8	Yes
Example 20	3	0.30	1.40	0.40	0.74	7.8	Yes
Example 21	3	0.35	2.00	0.65	0.74	5.3	Yes

Table 6

	Structures of Reinforcing material		G_1	G_2	δG	Separation length (mm)	Marketability
	Arrangement of Metal wires	Diameter of Metal wires (mm)					
Comparative example 3	3	0.21	1.40	0.38	0.22	8.5	None
Comparative example 4	10	0.21	1.40	0.38	1.07	8.5	None
Comparative example 5	3	0.3	2.20	0.58	0.74	12.7	None
Comparative example 6	10	0.21	1.74	0.65	1.07	8.5	None
Comparative example 7	12	0.21	1.74	0.65	1.28	10.4	None
Comparative example 8	3	0.30	0.96	0.18	0.74	16.8	None
Comparative example 9	3	0.30	0.96	0.18	0.32	21.5	None

As can be clearly understood from the above results, the effects of improvement in the resistance to belt end separation of the examples of the present invention, which are obtained by satisfying all of the conditions of (1) 1.40 mm $\leq G_1 \leq$ 2.00 mm, (2) 0.38 mm $\leq G_2 \leq$ 0.65 mm, and (3) 0.32 mm $\leq \delta G \leq$ 1.00 mm, are unexpectedly higher than those of the comparative examples.

I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and further, that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Date: May 30, 2008

Kota KITAHARA